REMARKS

The applicant respectfully request reconsideration in view of the following remarks. The applicant has corrected an obvious error in the specification with respect to Table 1. It appears that table 1 of the English translation application is not correct, with respect to polymer P1. Table 1 does not show that this polymer contains 10" % of monomer "IA1". This value is contained in the original German PCT application document as originally filed. The applicant has corrected Table 1 to reflect what was filed in the PCT application (see the published PCT Table 1).

The applicant has amended the claims to require that "Aryl" is substituted. Now the claims read on both the Aryl and vinylene being substituted. The claims are supported by the examples. No new matter has been added.

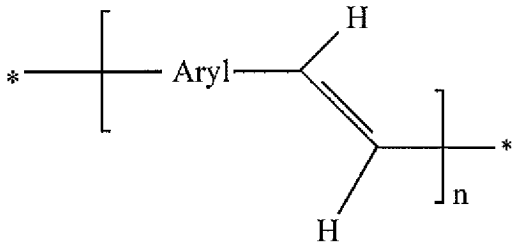
Claims 1-6, 8, and 9 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for specific bis(halomethyl)arylenes and compounds of formula I. The applicant respectfully traverses this rejection. The Examiner stated that the specification does not reasonably provide enablement for the broad genus claimed. The applicant's claimed invention requires that both the Aryl and vinylene being substituted.

Polyparaphenylenesvinylenes" (PPVs) can be divided into the following four groups:

1) Group 1: Neither substituted on the arylene groups nor substituted on the vinylene groups (prior art).
2) Group 2: Not substituted on the vinylene groups but substituted on the arylene groups (prior art).
3) Group 3: Not substituted on the arylene groups but substituted on the vinylene groups (not covered by the claims).
4) Group 4: Substituted on the arylene groups and on the vinylene groups (inventive).

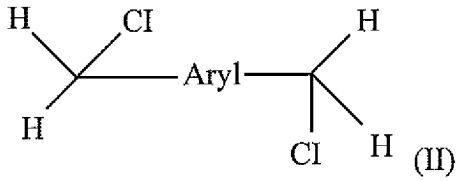
Again, the applicant's claimed invention now only covers Group 4 above (substituted on the arylene and on the vinylene groups.

According to the prior art (Groups 1 and 2 above), polyarylene-vinylenes are known having the following repeating units:



wherein the "Aryl-group" can contain the solubilising groups if Aryl is substituted (Group 2) and unsubstituted (Group 1) and the vinylene-group only contains two hydrogen atoms as substituents.

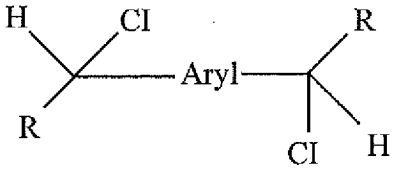
The above-described polymers can be obtained by polymerizing the following monomer (II):



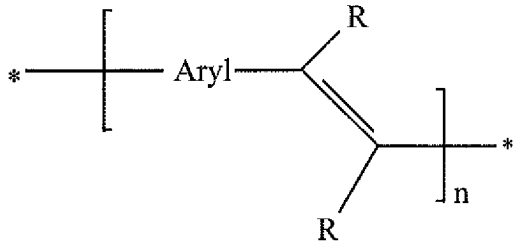
(II)

During the polymerization, on both sides of the monomer unit the chlorine atom and a hydrogen atom leave. Consequently, the resulting polymer has two hydrogen atoms as substituents at the vinylene group.

According to the present invention, beside the monomer of formula (II) as described above, which is a "bis(halomethyl)arylene" as described in pending claim 1 of the present application, additionally the following monomer of formula (I) is used:



which leads to the following repeating unit of polymer:



Therefore, the polymer of the present invention contains units which have two solubilizing groups R as substituents at the vinylene group. Independent from these groups, the polymer contains solubilizing groups at the arylene group (Group 4).

Both groups R contained in formula (I) are not "reactive groups" as stated by the Examiner, which leave the compound during the polymerization reaction, but are solubilizing groups which remain part of the compound during the polymerization reaction and are therefore also part of the resulting polymer. Consequently, the statement of the Examiner, according to which the instant claims allow for both substituted and non-substituted aryl groups on the bis(halomethyl)arylene and the compound of formula (I), is not correct, because, as pointed out above, the vinylene-group derived from the monomer of formula (I) contains two solubilizing groups R and is therefore substituted and not unsubstituted. The effect of the units of formula (I) as part of the inventive polymers is clearly demonstrated in the working examples of the present application. According to the examples, the unit of formula (I) has a significant influence on the molecular weight of the resulting polymers and consequently on their solubility as well as viscosity.

With respect to Group 1, the applicant believes that these polymers are absolutely insoluble in all known organic solvents.

The polymers of Group 2 are soluble in most of the known organic solvents as can be seen from the comparative examples of the present application, but their solubility is not very high (especially of C1, C4 and C5 of table 1 of the applicant's specification), because these polymers "gelled". A comparison of these comparative polymers C1, C4, and C5 with the corresponding inventive polymers P1, P4 and P5 clearly shows the solubilizing effect of the solubilizing groups contained on the vinylene groups. P1 and C1, P4 and C4 as well as P5 and C5 are identical with respect to the known monomers (M1 to M6). They only differ in that the inventive polymers additionally contain a small amount of the "inventive monomer" (i.e. IA1 and IA2). Nevertheless this small amount has a significant influence on the properties of the resulting polymers (especially the molecular weight, the viscosity and consequently also on the solubility) as can be seen from table 1.

Nevertheless, the following statement is possible with respect to this group of polymers: Their solubility is better than the solubility of the polymers of group 1, which are absolutely insoluble.

The inventive polymers of group 4 are better soluble than the polymers of group 2. Group 3 is no longer covered by the claims and consequently, the applicant believes that it is not necessary to compare the polymers of groups 2 and 3 as requested by the Examiner.

A patent application does not need to contain any examples for the application to be enabled. However, the applicants' application contains 12 examples (P1, P2(1a), P2 (1b), P2 (1c), P2(2), P2(3), P2(4), P3, P4(1), P4(2), P5(1) and P5(2)). The examples cover Group 4

which is claimed by the applicants. The applicants believe that it is clear from their specification, that there is adequate support and enablement for the claims as amended.

In view of the above response, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due in connection with the filing of this response, the Commissioner is authorized to charge or credit any overpayment to Deposit Account No. 03-2775 under Order No. 14113-00028-US, from which the undersigned is authorized to draw.

Respectfully submitted,

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